REMARKS

Claims 1 and 6 have been amended. Claims 1 and 3-7 are now pending in this application. Support for the amendments is found in the existing claims and the specification as discussed below. Accordingly, the amendments do not constitute the addition of new matter. Applicant respectfully requests the entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Information Disclosure Statement

The Examiner's remarks regarding consideration of the English Abstracts in item 2 of the January 22nd Office Action are greatly appreciated. However, the Examiner indicated that newly initialed Information Disclosure Statements were provided with the January 22nd Office Action. These initialed sheets have not been received. Applicants respectfully request that the Examiner forward these initialed sheets with the next Office Communication.

Rejection under 35 U.S.C. § 102(b) (Jacobsen)

Claims 1, 3 and 5-6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Jacobsen, et al. (US Patent No. 6,033,784).

This ground of rejection is addressed by amendment of claims 1 and 6 taken with the following comments.

Jacobsen, et al. teach a method of immobilizing a molecule via a quinone compound. The teaching of Jacobsen, et al. is outside the scope of the presently amended claims. The present claims have been amended to recite "spotting a solution consisting essentially of the biomolecule on the carrier". The claim language is not open-ended and would not encompass additional components besides the biomolecule such as the quinone taught by Jacobsen, et al. Support for the amendment is found throughout the Examples of the present specification, particularly with respect to oligonucleotides corresponding to SEQ ID NOS: 2 and 5. The presently claimed invention differs from the teaching of Jacobsen, et al. which requires the use of a photochemically reactive compound such as an anthraquinone as a linker.

In view of Applicants' amendments and comments, reconsideration and withdrawal of the above ground of rejection is respectfully requested.

Rejection under 35 U.S.C. § 102(b) (Zimlich)

Claims 1 and 4-6 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Zimlich, et al. (US Patent No. 5,288,647).

Zimlich, et al. differ from the claimed invention in that Zimlich, et al. teach a carrier which is nylon. The present claims recite a number of specific thermoplastic resins but do not include the species "nylon" taught by Zimlich, et al. Note Applicants' claims are directed to specific species, not to thermoplastic resins generally. Zimlich, et al. do not teach any of the presently claimed species of thermoplastic resin.

In view of Applicants' arguments, reconsideration and withdrawal of the above ground of rejection is respectfully requested.

Rejection under 35 U.S.C. § 103(a) (Jacobsen & Zimlich)

Claims 1, 4, and 6-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jacobsen, et al. (US Patent No. 6,033,784) in view of Zimlich, et al. (US Patent No. 5,288,647).

As discussed above, Jacobsen, et al. teach the use of a photochemically reactive compound, a quinone, to link the ligand to the substrate. In contrast, the present claims are directed to attachment of a biomolecule directly to the carrier, without the use of a linker or other molecule. Support for the amendment is found throughout the Examples of the specification as discussed above. Based upon Jacobsen, et al. one of ordinary skill in the art would not have been motivated to attach a biomolecule to a carrier directly as claimed without a linker compound which is photochemically reactive. Instead one would rely upon a linker as taught by Jacobsen, et al.

Zimlich, et al. does not correct the deficiencies of Jacobsen, et al. Zimlich, et al. is concerned primarily with providing instrumentation so that the UV dose may be precisely controlled. Zimlich, et al. provides only minimal detail on the actual binding of the polynucleotide to the carrier, which in any case, is different from the material as claimed by Applicants. Zimlich, et al is directed to carriers which are of a different material (nylon or nitrocellulose membrane) than the carriers of the claimed invention. Accordingly, one of ordinary skill in the art would not consult Zimlich, et al for a teaching on attachment of a biomolecule to a solid support, particularly since Zimlich, et al teach a completely different carrier material. As discussed in the previous response, the nylon and/or nitrocellulose membranes of Zimlich, et al are flexible, paper-like disks which differ from the molded supports

of the present claims which can be formed into any desired shape as discussed in the present specification at page 10, second full paragraph. Zimlich, et al. is concerned with a UV delivery device and does not address the problem of providing attachment of biomolecules to inexpensive resins, simply and without the need for precoating. Accordingly, the cited references, taken separately or together, do not teach or suggest all of the limitations of the presently claimed invention.

The combination of Jacobsen and Zimlich would not lead one of ordinary skill to the claimed invention. Based upon Jacobsen, one would use a quinone compound to link the biomolecule to a nylon or nitrocellulose membrane. There is no motivation found in the combination of references to attach a biomolecule without a linker directly to a solid support which is an inexpensive synthetic resin as claimed.

In view of Applicants' amendments and arguments, reconsideration and withdrawal of the above ground of rejection is respectfully requested.

CONCLUSION

In view of Applicants' amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: Che S. Chereskin

Che Swyden Chereskin, Ph.D.
Registration No. 41,466
Agent of Record
Customer No. 20,995
(949) 721-6385

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